searches. Among those who will offer courses at the station during the coming session are the following: Trevor Kincaid, professor of zoology, University of Washington; Nathaniel L. Gardner, acting professor of botany, University of California; W. J. Baumgartner, assistant professor of zoology, University of Kansas; Geo. B. Riggs, assistant professor of botany, University of Washington; W. L. Moodie, instructor in botany, Bellingham State Normal School; F. A. Hartman, instructor in zoology, Seattle High School. For those wishing to investigate the marine fauna and flora of the northwest coast the Puget Sound Marine Station, located in the midst of a picturesque archipelago of rocky islands, offers an unsurpassed opportunity. Further information with regard to the station will be supplied by the director, Professor Trevor Kincaid, University of Washington, Seattle, Wash.

UNIVERSITY AND EDUCATIONAL NEWS

JOHNS HOPKINS UNIVERSITY has received an offer of $250,000 from the General Education Board for the purpose of aiding the university in its efforts to put into operation certain extensions and improvements that have been under consideration for several years, including the erection of new buildings on the Homewood site. This sum will be contributed conditional on the raising of a supplementary sum of $750,000 by the university by December 31, 1910. The university, however, is endeavoring to raise $2,000,000, half for new buildings, while the other $1,000,000 will be used for endowment. Among the extensions contemplated are a school of engineering; a law school; a training school for teachers; a department of preventive medicine, and a building for pathology.

A JOINT hearing on the bills to appropriate $652,000 for new buildings for the College of Agriculture and $130,000 for new buildings for the Veterinary College at Cornell University was given on April 5 by the finance committee of the senate and the ways and means committee of the assembly. Thirty-six persons spoke in favor of the bills and nobody appeared in opposition to them. From the standpoint of the colleges addresses were given by Acting Director H. J. Webber, Dr. V. A. Moore and Director L. H. Bailey. The hearing was closed by President Schurman's address summarizing the argument.

DR. CHEESMAN A. HERRICK, formerly principal of the William Penn high school for girls, was installed as president of Girard College on April 2.

DR. ALBERT E. GIESCKE, an American and a graduate of Cornell University in political science, has been elected rector of the University of Cuzco, Peru. This university was founded by a papal decree of 1692. Dr. Giescke went there as a member of the faculty in 1908.

AT Stanford University appointments have been made as follows: E. W. Ponzzer, of the University of Illinois, assistant professor of applied mathematics; Hans Zinsser, instructor in bacteriology in Columbia University, associate professor of bacteriology; Frank P. Blaisdell, assistant professor of anatomy; David M. Folsom, assistant professor of mining; Galen H. Clevenger, assistant professor of metallurgy; Rufus C. Bentley and Lewis M. Terman, assistant professors of education. As instructors have been appointed Perley A. Ross, in physics, and George F. McEwen, in applied mathematics. The following promotions have been made: George C. Price, now associate professor, to be professor of zoology; George J. Peirce, now associate professor, to be professor of botany; William A. Hillebrand, now instructor in electrical engineering, to be assistant professor; Royce R. Long, now instructor in physical training, to be assistant professor; Luther W. Bahney, now instructor in metallurgy, to be assistant professor.

DISCUSSION AND CORRESPONDENCE

THE GERM THEORY OF DISEASE

IN SCIENCE for April 1, p. 500, Dr. Fielding H. Garrison has pointed out the true author of the germ theory. We can readily accept this until an earlier author is discovered by some one. Knowledge in most cases seems to

be built up from the investigations of a number of observers. Dr. Garrison closes his very interesting account by saying: "But no one ever thought of mosquitoes in relation to yellow fever before the time of Finlay and Walter Reed." Dr. Reed and his associates proved the theory, which was the all-important event, but it may not be amiss to call attention to an article published by Dr. Josiah C. Nott in 1848. He was evidently a learned physician of wide experience, a keen observer and reasoner, and in addition had a profound knowledge of the literature of zoology, particularly entomology. To what extent he anticipated present knowledge of the mosquito transmission of yellow fever may be somewhat a matter of opinion. The article is a most interesting one and will well repay perusal. It should be read in its entirety to get the proper conception of it and realize to what a remarkable degree the man was ahead of his day. The title is "Yellow Fever contrasted with Bilious Fever—Reasons for believing it a disease sui generis—Its mode of Propagation—Remote cause—Probable insect or animalcular origin, etc., by Josiah C. Nott, M.D., Mobile, Alabama. New Orleans Medical and Surgical Journal, IV., pp. 563–601, 1848." A few extracts may prove interesting, as this journal is not accessible to many persons.

I propose to now show, from facts presented during the various Epidemics in Mobile that the morbific cause of Yellow Fever is not amenable to any laws of gases, vapors, emanations, &c., but has an inherent power of propagation independent of motions of the atmosphere, and which accords in many respects with the peculiar habits and instincts of insects. . . . There are even perfectly authenticated instances where one side or end of a ship has suffered severely from this disease, whilst the other was entirely free from it! We can readily believe, that certain insects which are endowed with unaccountable instincts and habits might attack a part of a ship, or a tree, of a wheat or cotton field; but we can not imagine how a gas could be turned loose on one side of the cabin of a vessel and not extend to the other. . . . Yellow Fever can not be explained by the malarial[1] theory, and it must remain with the reader to determine whether the chain of analogies offered, render the Insect theory more probable. . . . With these facts before us, how much more easily may we account for the spread of yellow fever from a focus, by the insect, than by the malarial[1] hypothesis—here is something tangible and comprehensible.

In regard to cholera he says: "The history of these great epidemics which sweep over the surface of the globe affords very strong support to the Insect theory." Dr. Nott's remarks on vessel quarantine are in absolute accord with the knowledge and practise of today.

[1] Used in the sense of bad air.

Henry Skinner
The Academy of Natural
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Does Excessive Light Limit Tropical Plankton?

To the Editor of Science: Among the numerous explanations of the richness of polar seas in plankton and the poverty of tropical waters, I fail to see any mention of the lethal effect of excessive light, yet this effect is so well known that we make daily use of sunlight to destroy pathogenic organisms, all of which flourish in the dark only. The tropics are rich in all land forms, but in every case there is some provision by which the protoplasm is protected from excessive light, and, as a matter of fact, the ordinary bacteria of northern latitudes do not flourish in the tropics. In the waters, on the other hand, unpigmented forms have nowhere to hide, as in caves, crevices, under rocks or under the shade of pigmented ones, except as parasites in the bodies of multicellular organisms, and must perish through this disinfecting power of the sun's rays. The same phenomenon has been found by the metropolitan sewage commission in the waters of New York harbor, where the winter flora derived from sewage is far richer than the summer.

The vernal increase of phyto-plankton in northern waters is the same phenomenon as the vernal increase of land plants—due to the return of the sun with non-lethal amounts of light which are utilized in the decomposition of carbon dioxide by the chlorophyl. To be sure, the increased temperature of the air is the main reason for renewed protoplasmic ac-